



Spokane River and Coeur d'Alene Lake Operation

Pat Maher, Sr. Hydro Operations Engineer

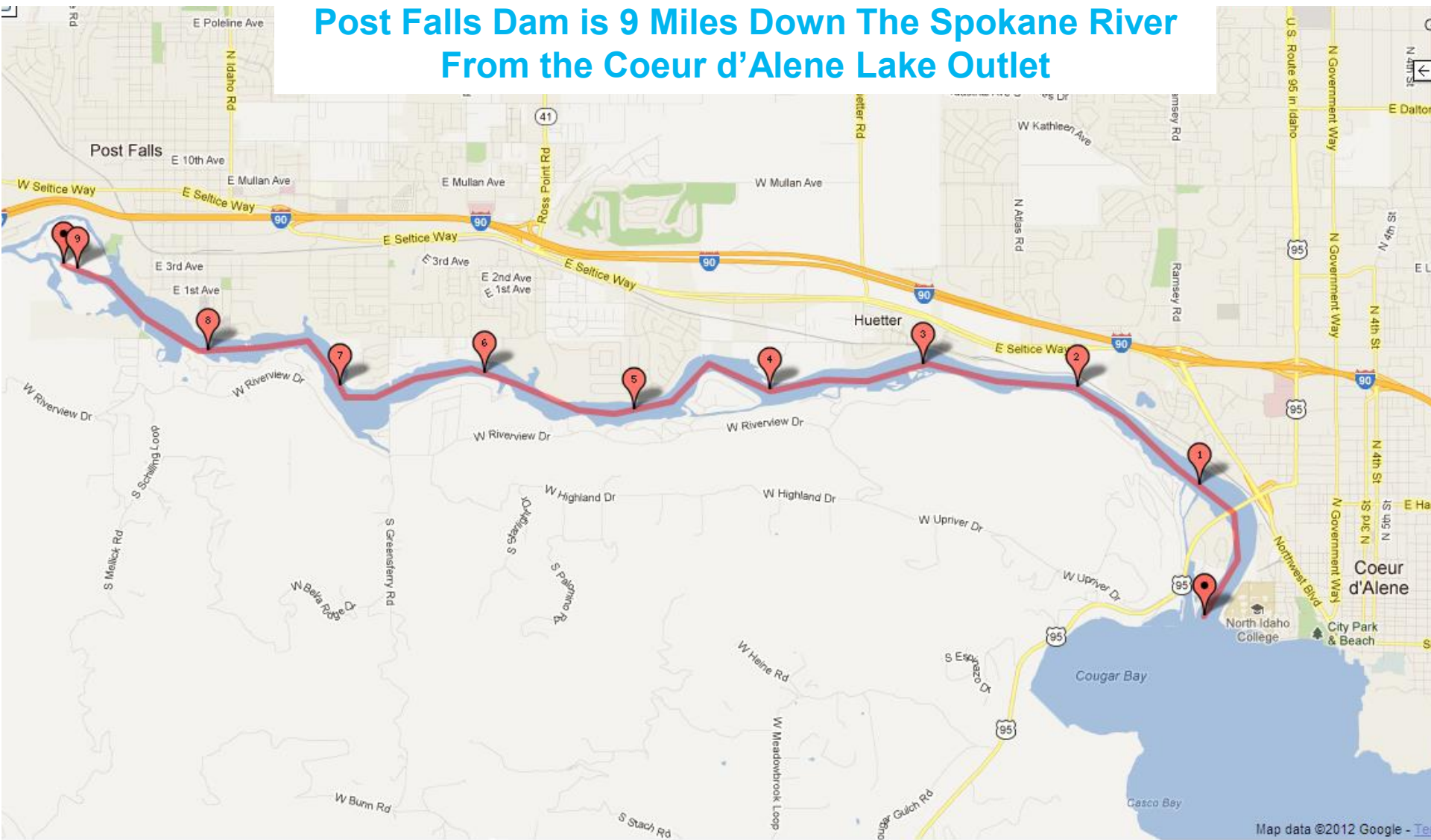


125
YEARS OF SERVICE
1889-2014

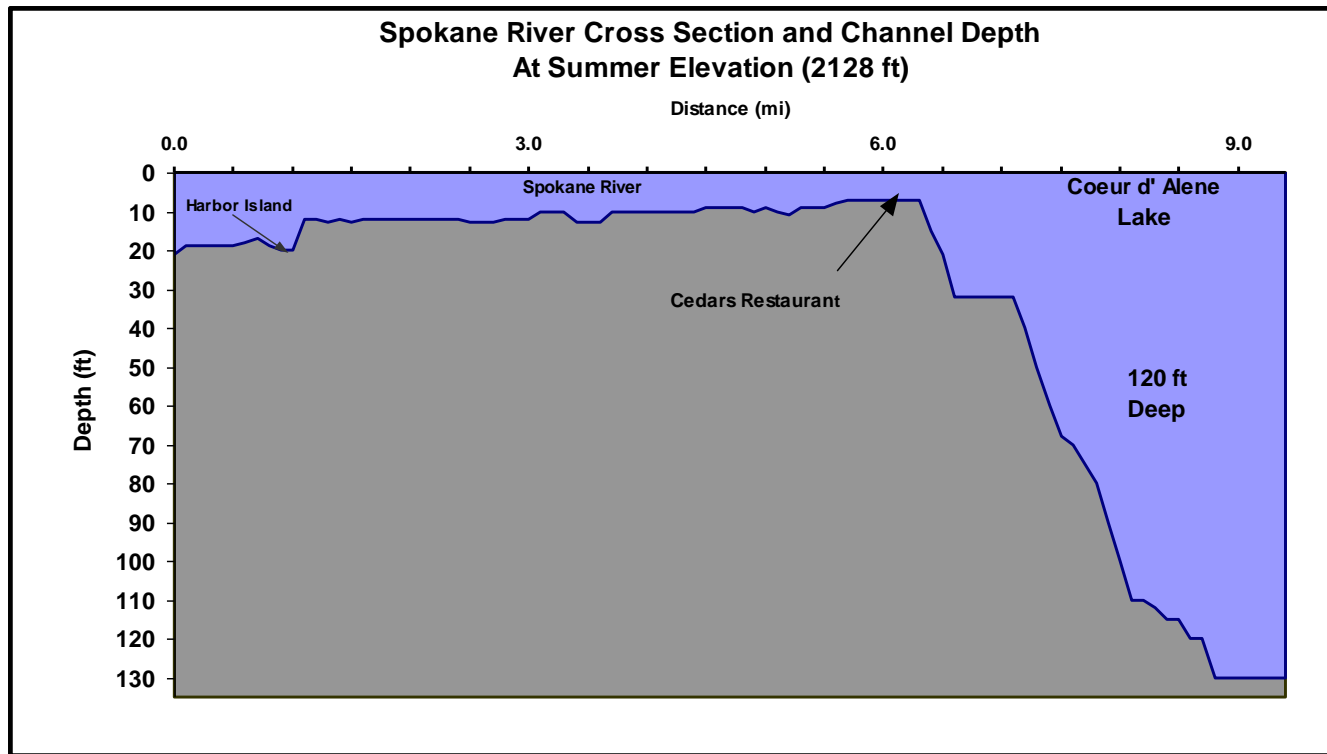
3 Rivers Flow into the Lake, 1 River Flows Out



Post Falls Dam is 9 Miles Down The Spokane River From the Coeur d'Alene Lake Outlet



Coeur d'Alene is a Natural Lake, not a Reservoir

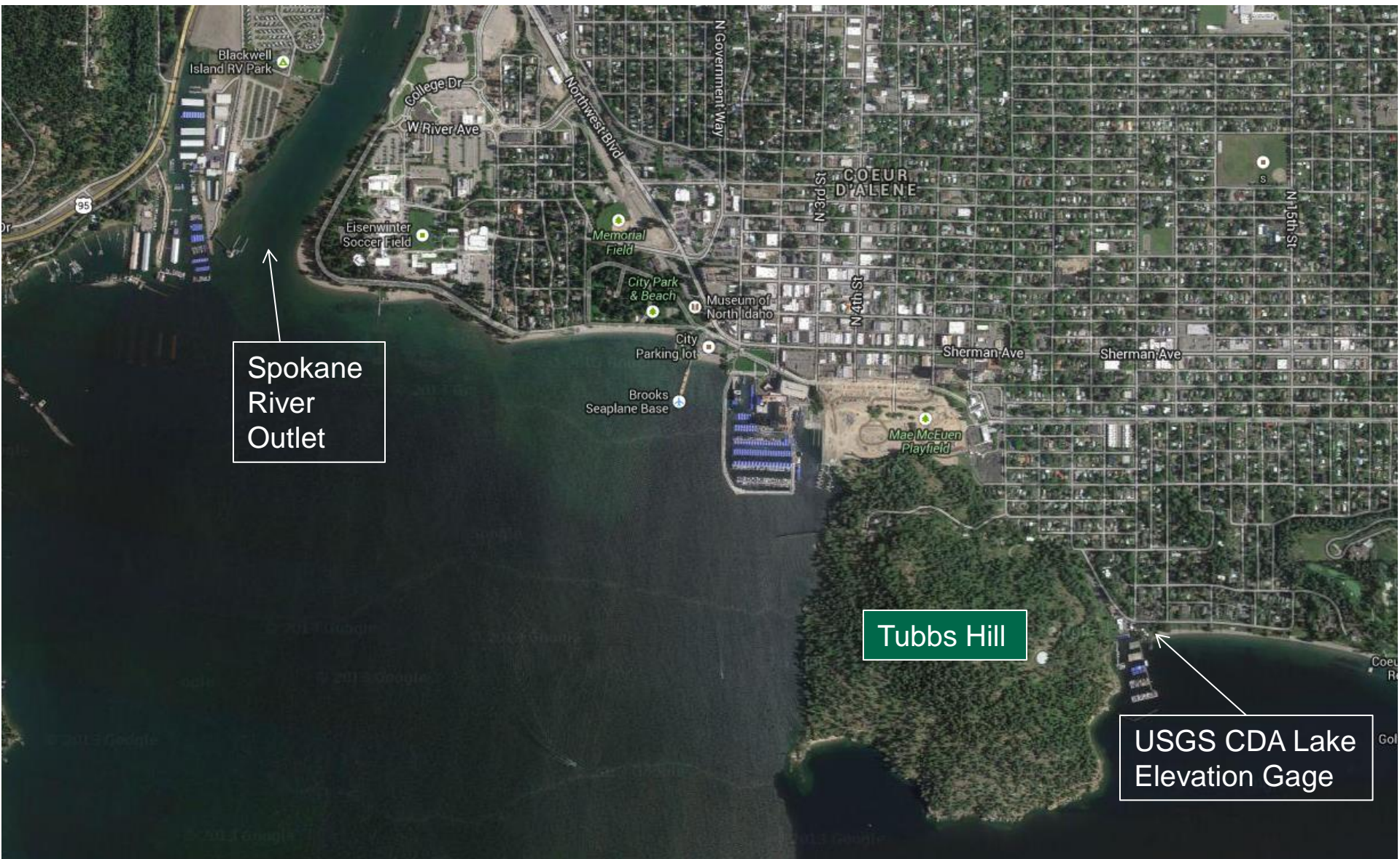


- Outlet channel capacity at summer level = 17,500 CFS
- Outlet channel capacity at 2131.5 (average high) = 28,500 CFS
- Outlet channel capacity at 2122.5 (average low) = 3,950 CFS
- Outlet channel capacity at 2121.3 (current elevation) = 2000 CFS



125
YEARS OF SERVICE
1889-2014

AVISTA



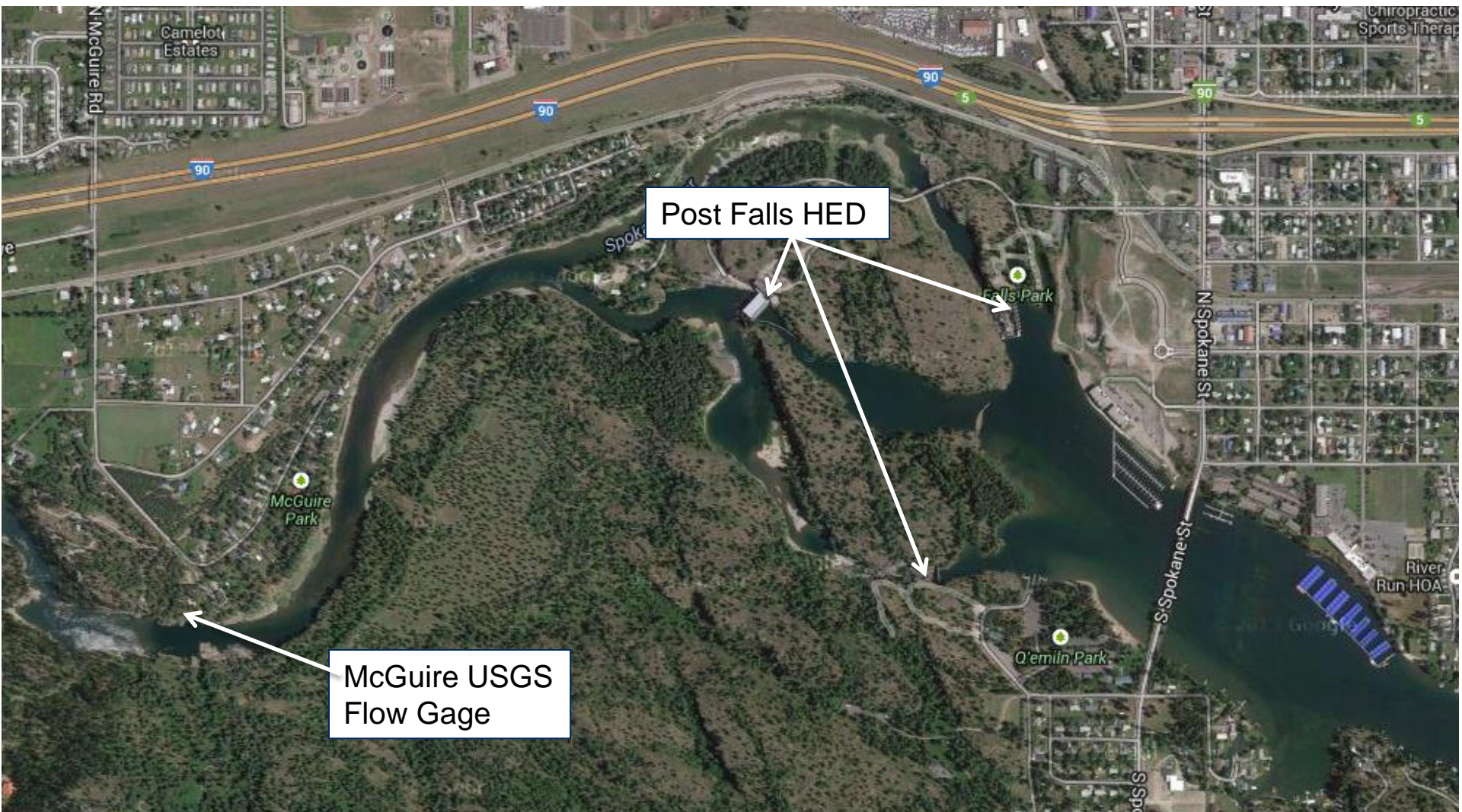
Spokane
River
Outlet

Tubbs Hill

USGS CDA Lake
Elevation Gage

By Ordinance, Boating Below Spokane St. Bridge Prohibited Whenever Spill Gates are Open

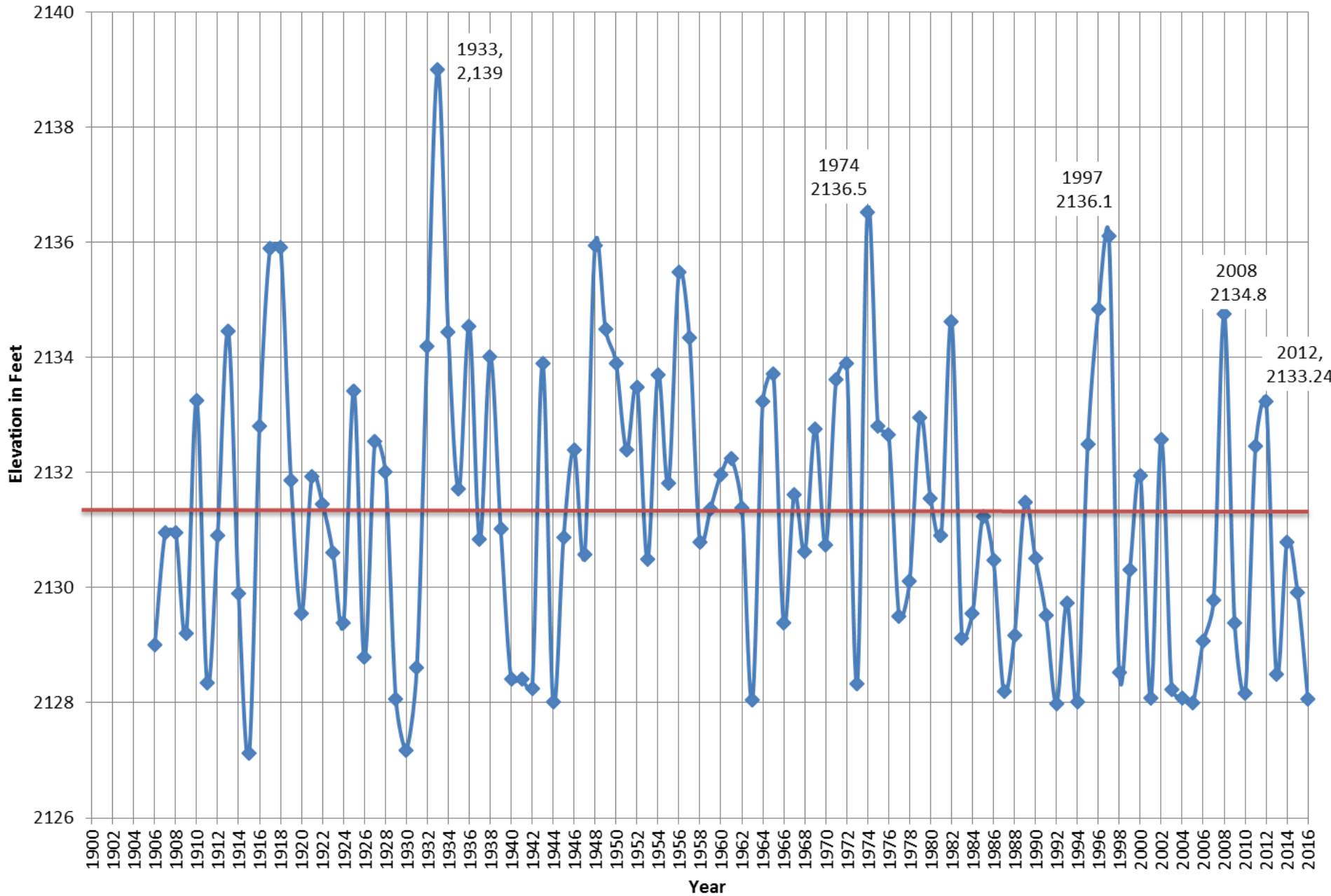




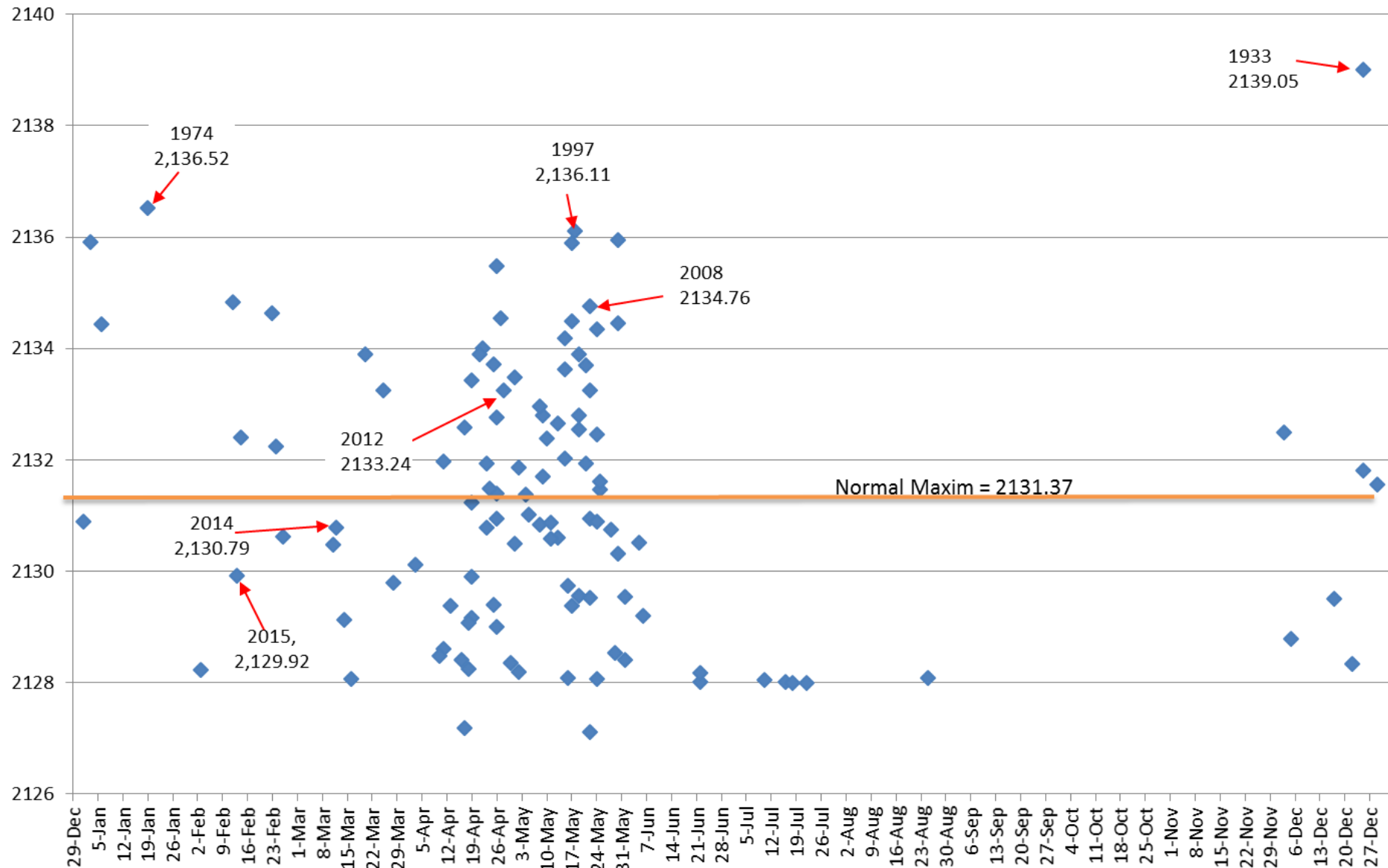
River Operations Overview

- Summer – Avista holds the level of CDA Lake at 2128 for recreation and public use. Because the dam spill gates are closed, the river above the dam looks like a lake.
- Fall – The Tuesday after labor day Avista starts to let water out of CDA Lake, drawing the lake down about 1 ½ feet per month until the river is in a natural state.
- Winter - At some point in December or January the outlet restriction at the river outlet becomes the determining factor of how much water will flow down the Spokane River. From then until we close the spill gates in June, the Post Falls dam has little or no effect on river flows or lake levels.
- Spring- The Spokane river behaves like a river, not a lake, above the dam, until the snow has melted and we start to close spill gates. If the river flows are very high, river elevations will increase.

Lake Coeur d'Alene Maximum Elevation by Year

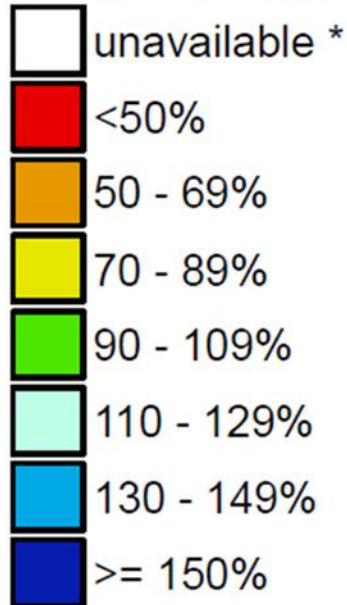


Dates for Annual Maximum's Coeur d'Alene Lake Elevations



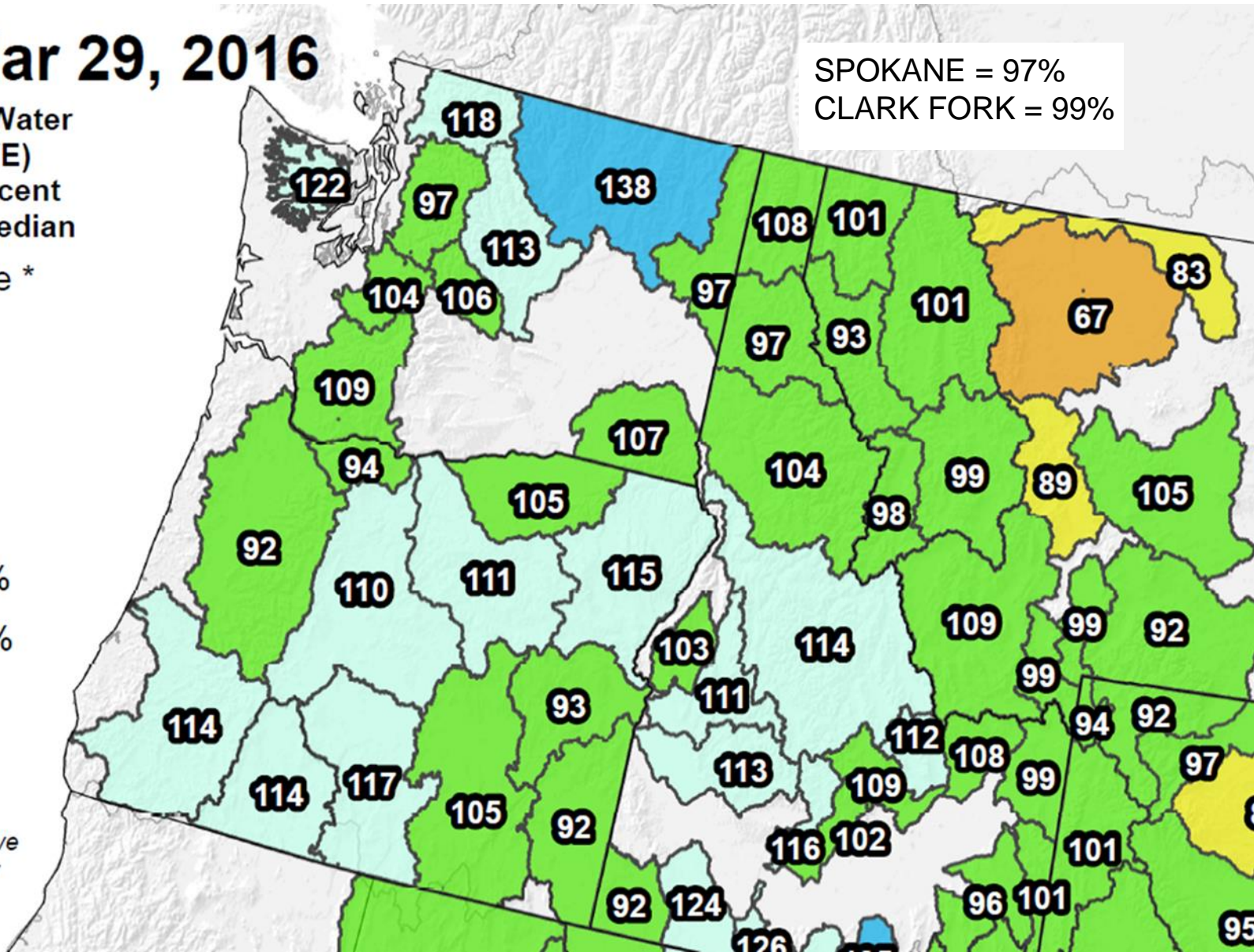
Mar 29, 2016

Current Snow Water
Equivalent (SWE)
Basin-wide Percent
of 1981-2010 Median



* Data unavailable
at time of posting
or measurement
is not representative
at this time of year

SPOKANE = 97%
CLARK FORK = 99%

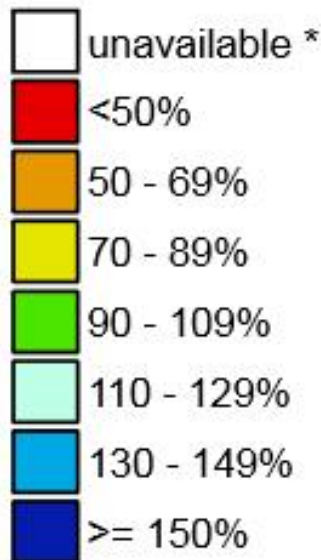


Westwide SNOTEL Current Snow Water Equivalent (

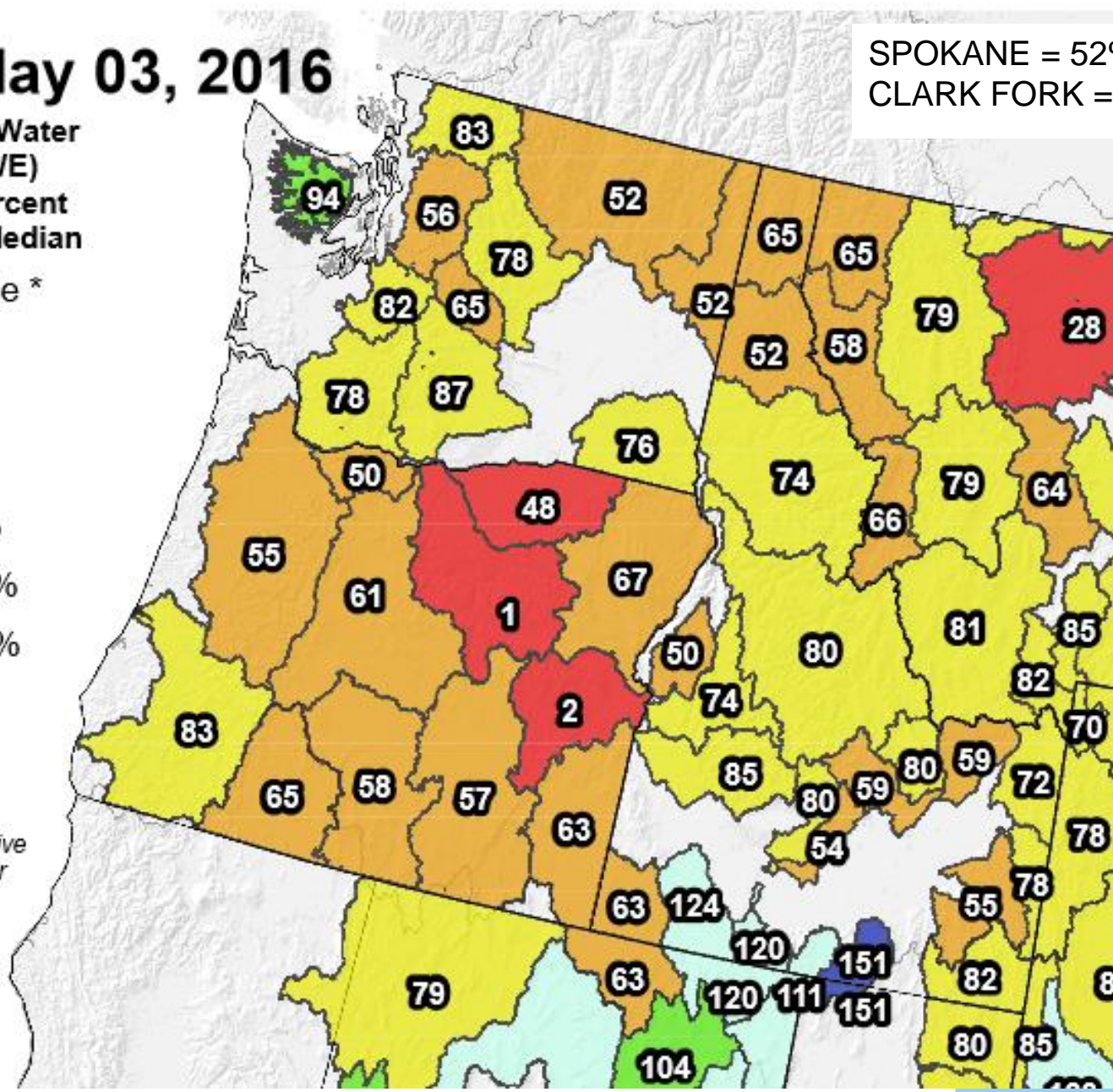
May 03, 2016

SPOKANE = 52%
CLARK FORK = 74%

Current Snow Water
Equivalent (SWE)
Basin-wide Percent
of 1981-2010 Median



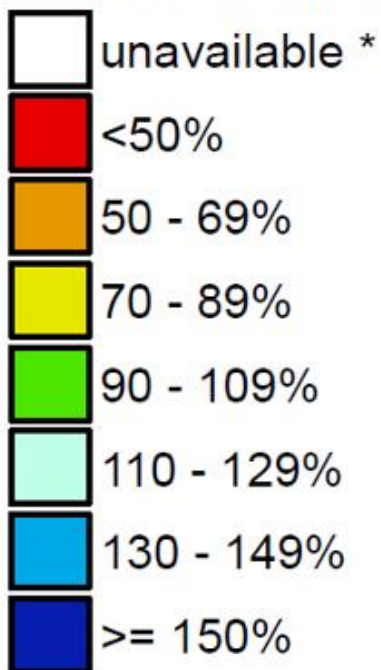
* Data unavailable
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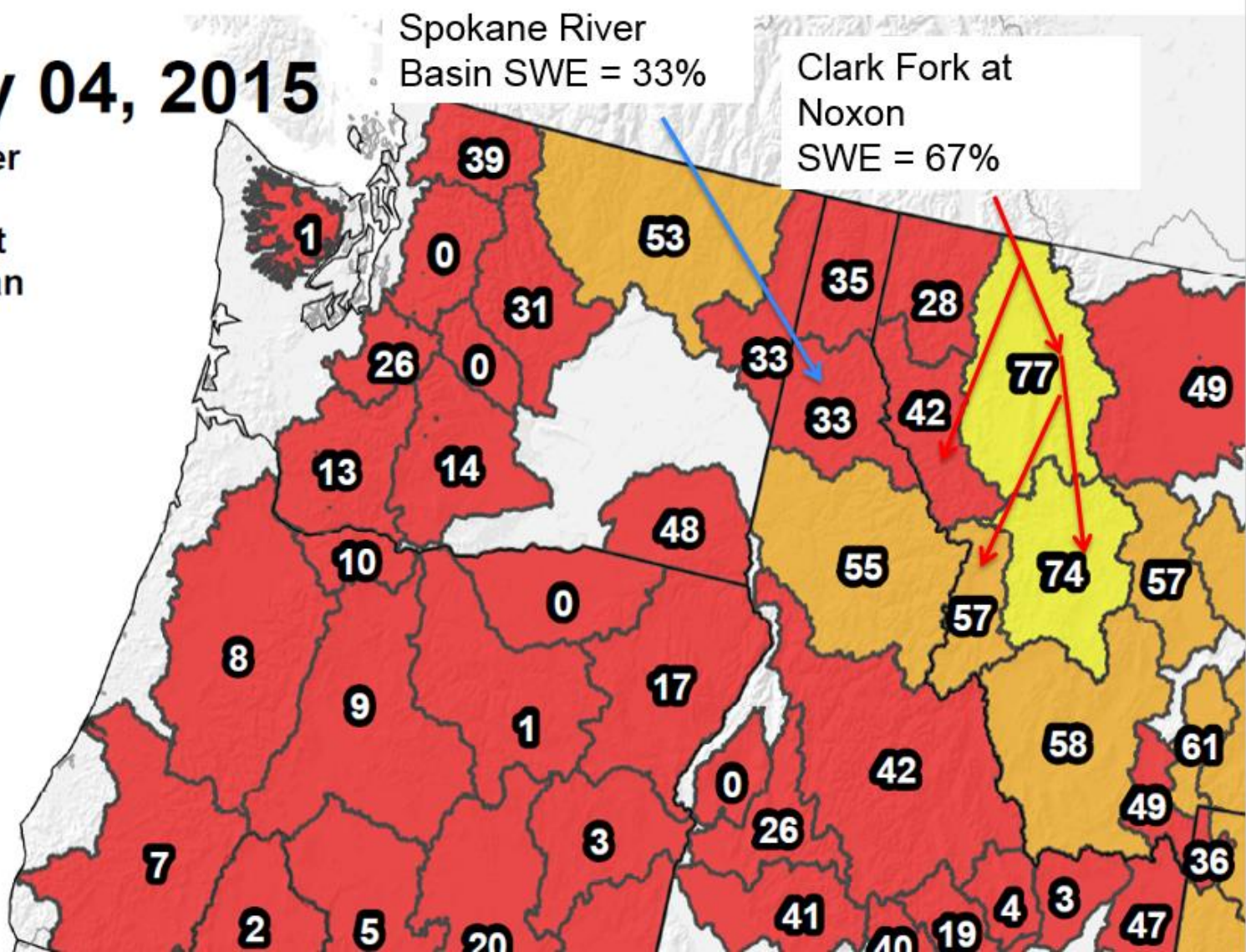
Westwide SNOTEL Current Snow Water Equivalent

May 04, 2015

Current Snow Water Equivalent (SWE)
Basin-wide Percent
of 1981-2010 Median

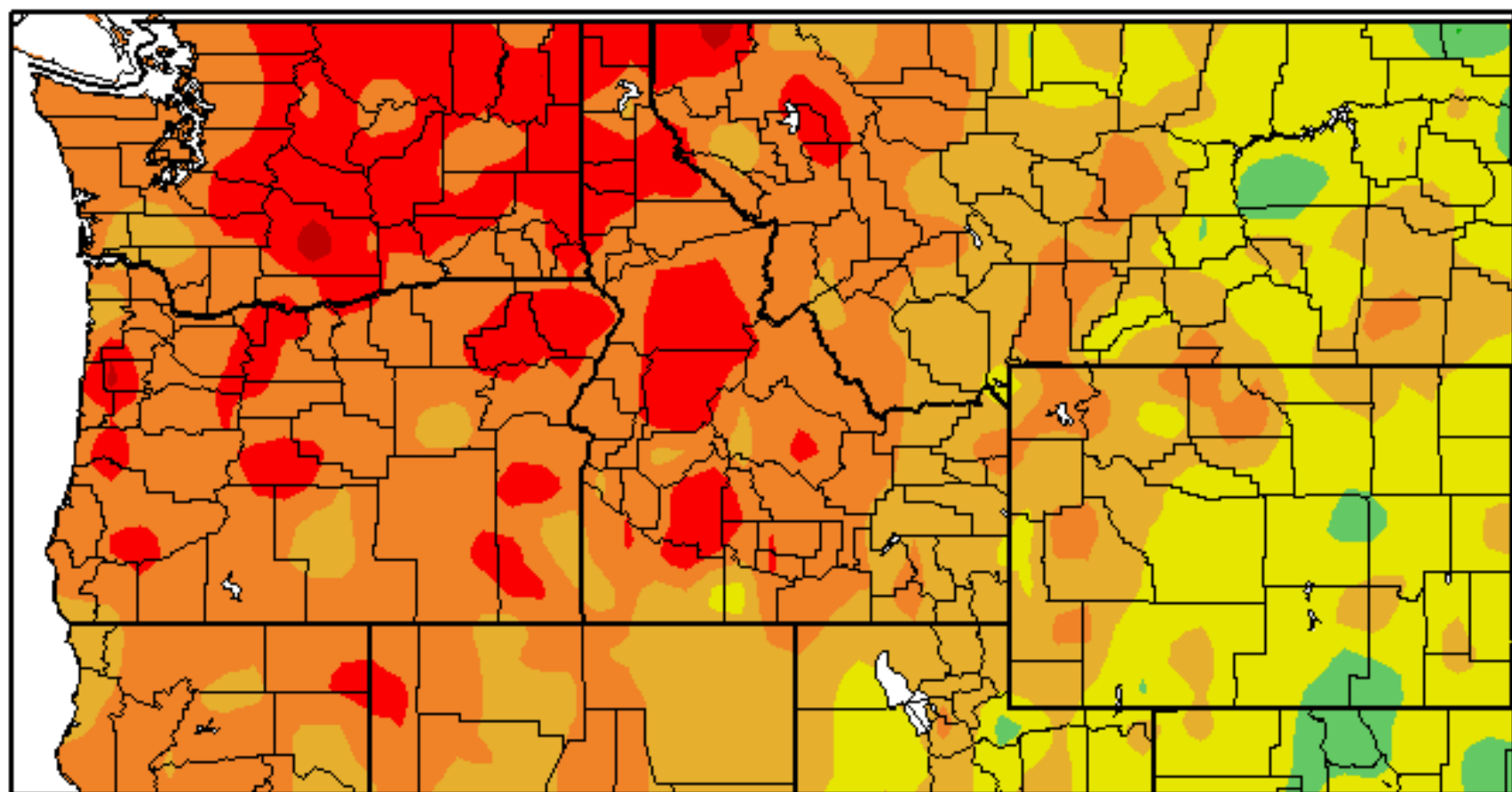


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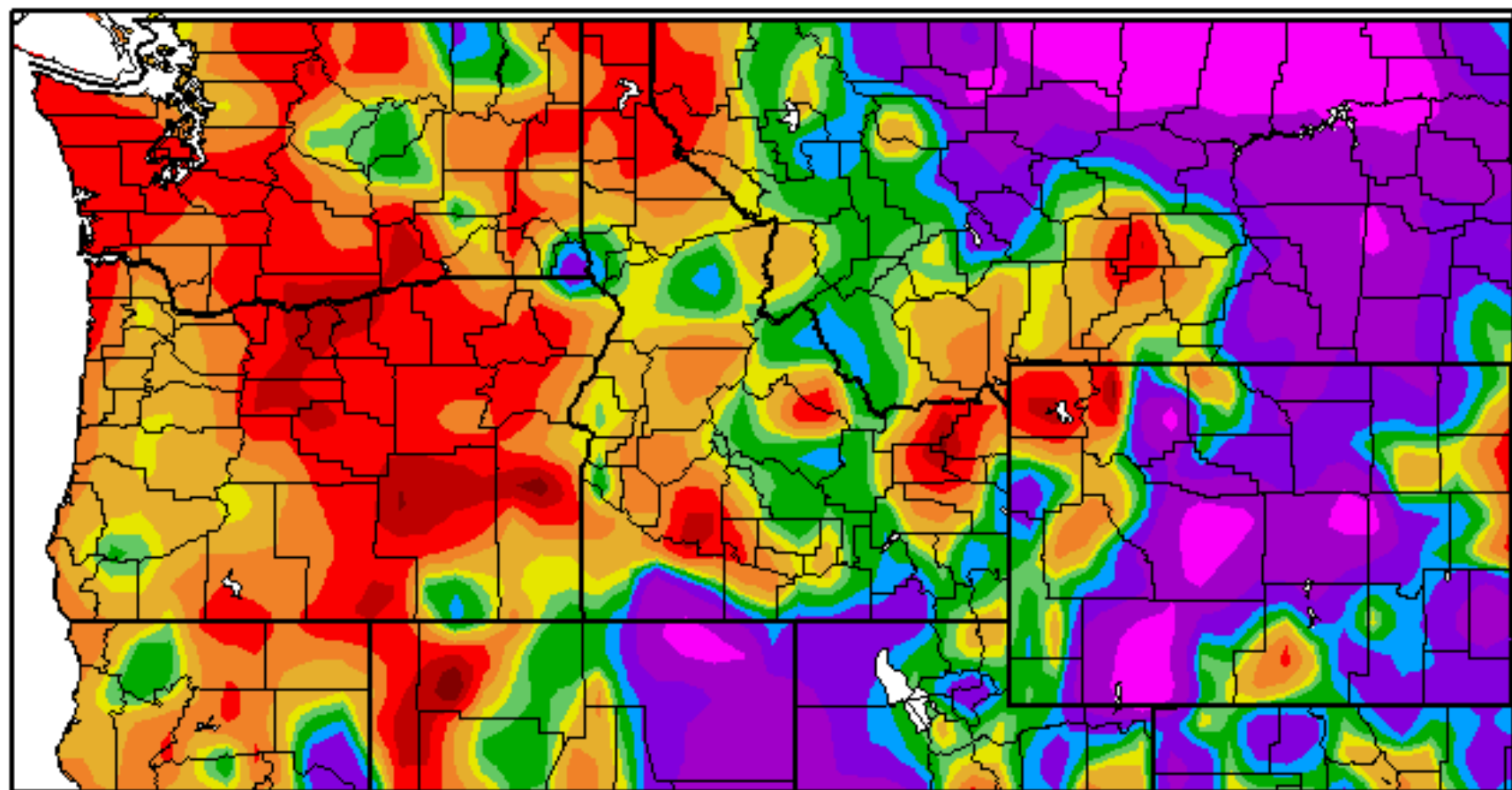


Departure from Normal Temperature (F)

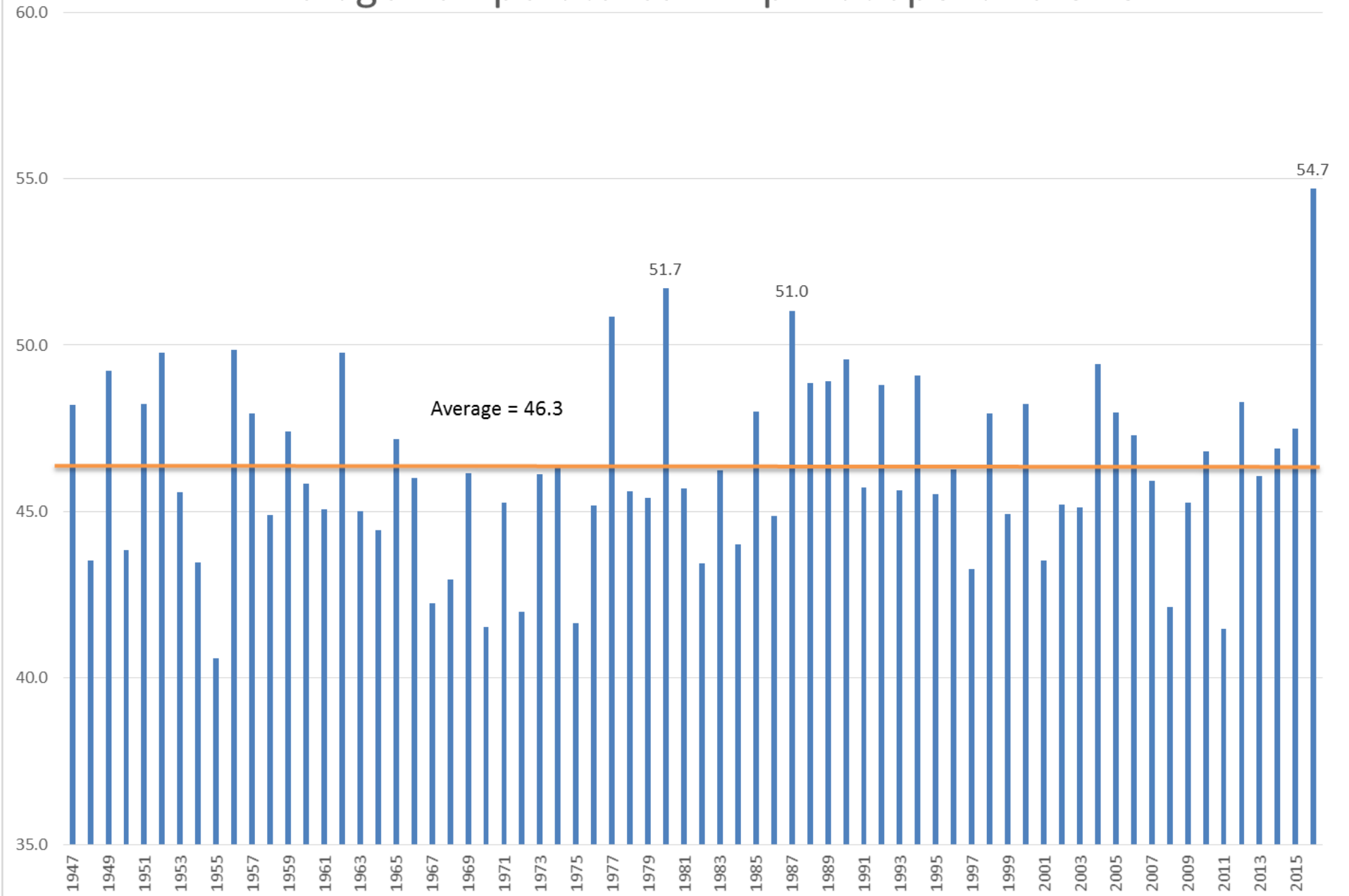
4/1/2016 – 4/30/2016



Percent of Normal Precipitation (%)
4/1/2016 - 4/30/2016

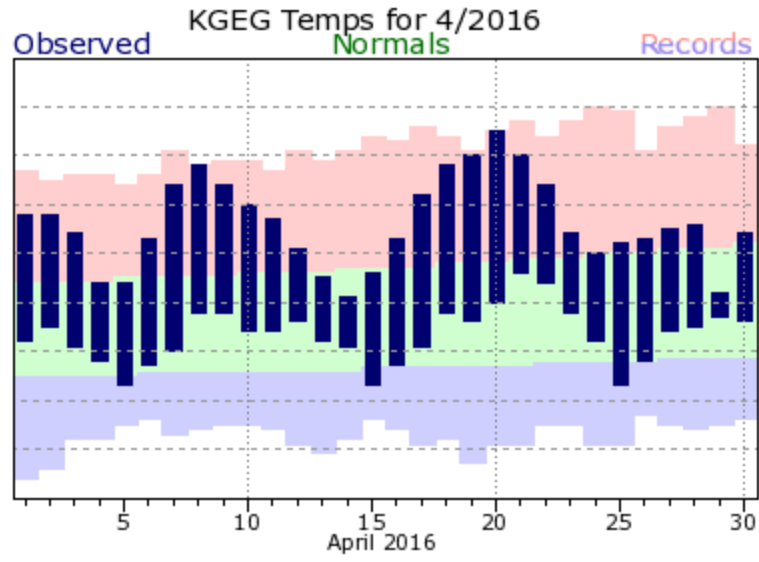


Average Temperatures in April at Spokane GEG



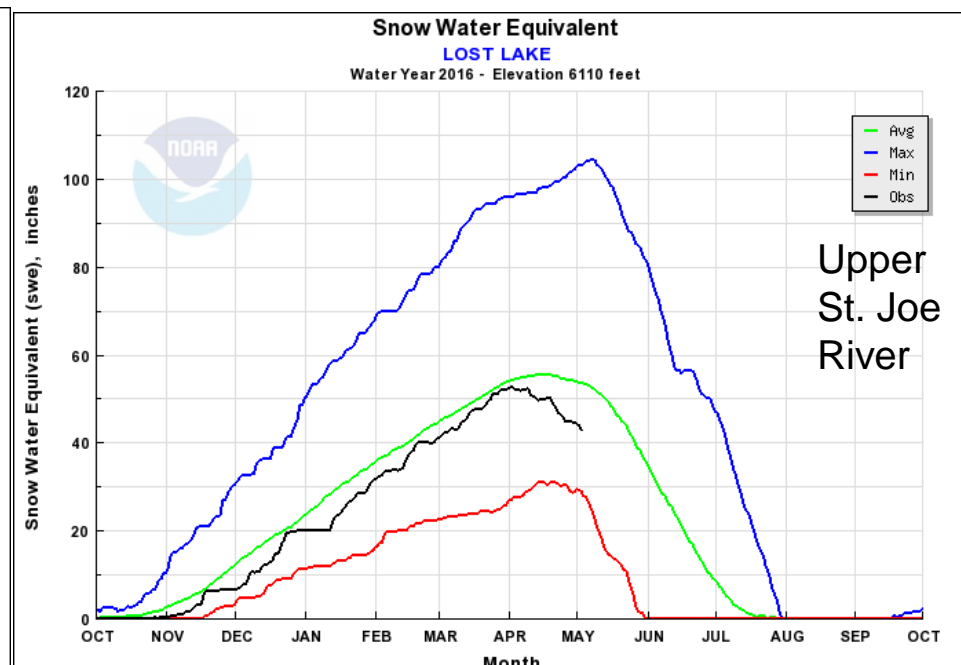
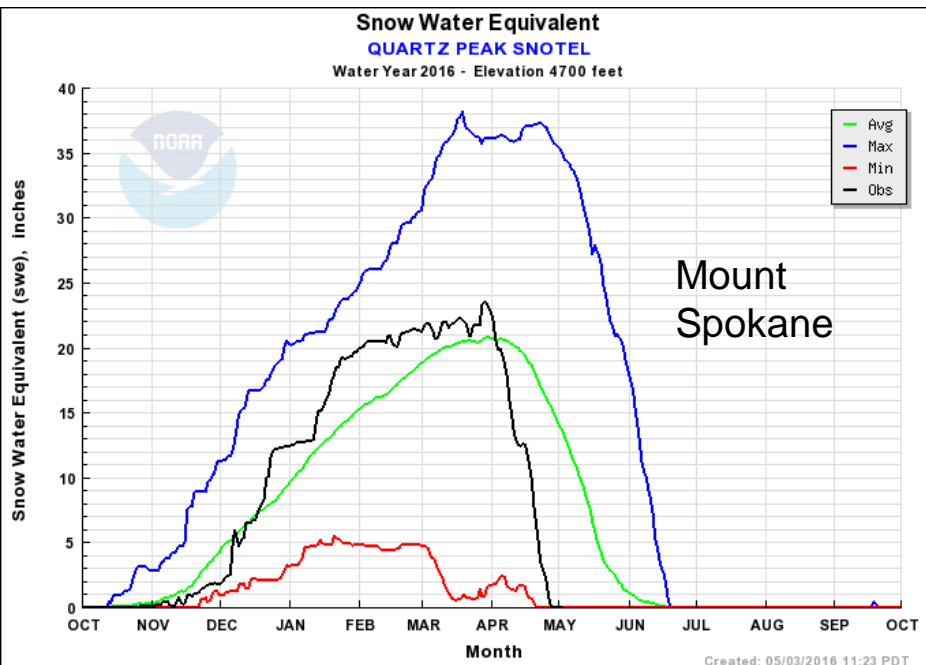
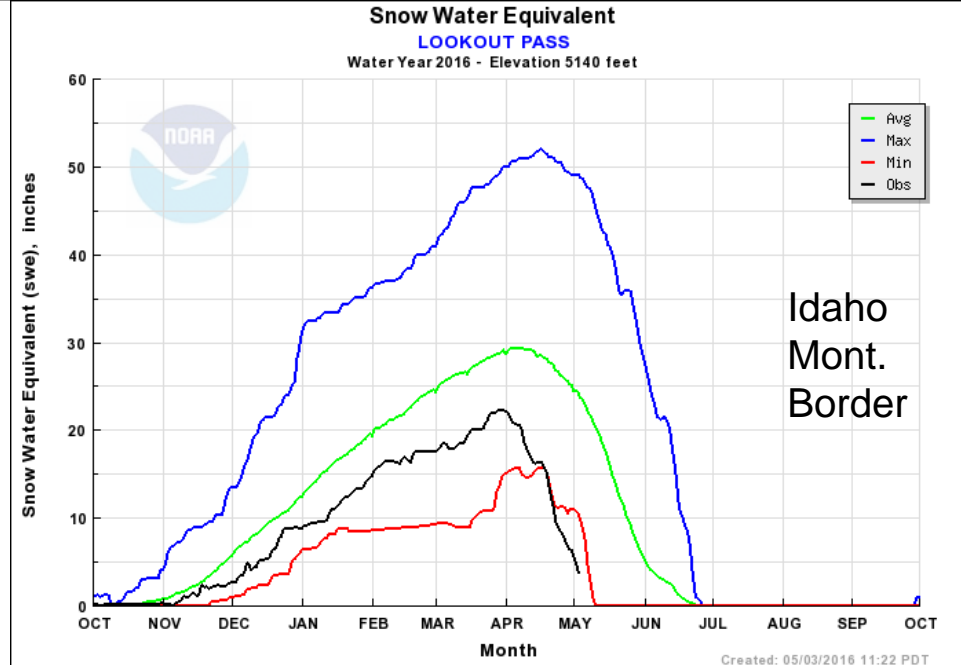
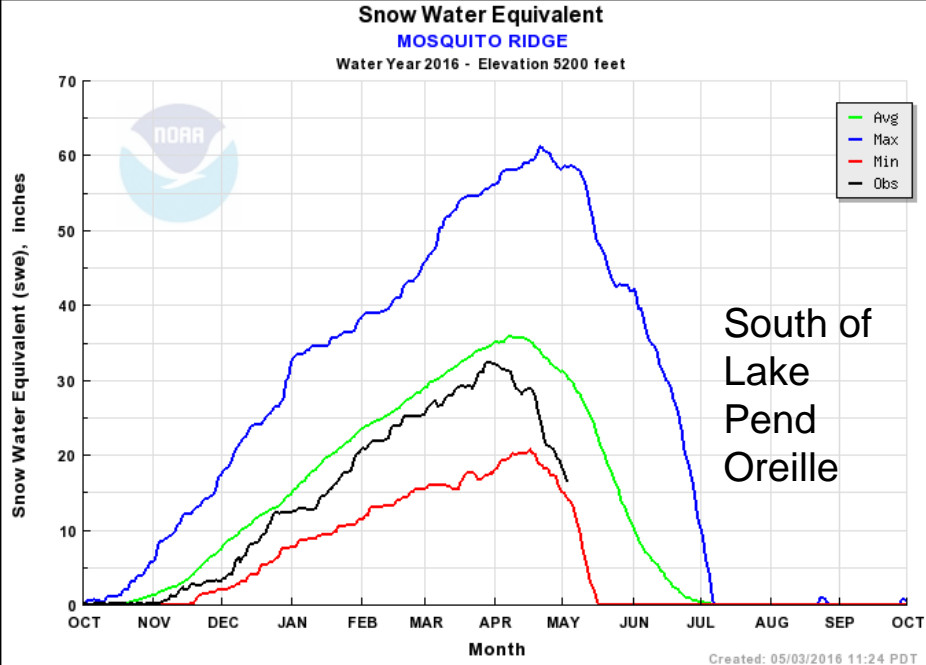


Spokane Weather For April 2016



KSEG April, 2016

Date	Observed Low (F)	Observed High (F)	Normal Low (F)	Normal High (F)	Record Low (F)	Year	Record High (F)	Year	Observed Precipitation (inches)	Record Precipitation (inches)
1	42	68	35	54	14	1936	77	1900	0	.67 1978
2	45	68	35	54	16	1936	75	1992	0	.57 1910
3	41	64	35	54	22	1935	76	1944	0	.52 2009
4	38	54	35	54	22	1936	76	1889	.13	.43 1913
5	33	54	35	55	25	1997	74	1952	0	.77 1901
6	37	63	36	55	26	2012	76	1930	0	.85 1988
7	40	74	36	55	23	1908	81	1977	0	.47 1922
8	48	78	36	55	24	1992	78	2016	0	.68 1971
9	48	74	36	55	25	1945	79	1925	0	.71 1965
10	44	70	36	56	25	1954	79	1925	0	.40 1993
11	44	67	36	56	24	1983	77	1913	0	.94 1982
12	46	61	36	56	21	1997	81	1943	T	.60 1939
13	42	55	36	56	19	1968	79	1943	T	1.23 2000
14	41	51	36	57	22	1890	81	1926	.05	.75 1937
15	33	56	37	57	26	1955	84	1926	0	.72 1904
16	37	63	37	57	24	1968	83	1936	0	.43 1948
17	41	72	37	57	21	2013	86	1936	0	.50 1948
18	48	78	37	58	22	1966	84	1910	0	.37 1996
19	46	80	37	58	17	1966	81	1908	0	.96 1997
20	50	85	37	58	21	1927	85	2016	0	.45 1997
21	56	80	37	59	21	1968	87	1906	0	.48 1904
22	54	74	38	59	25	1972	84	1934	T	1.04 1882
23	48	64	38	59	25	2002	87	1977	.06	.70 1996
24	42	60	38	60	21	2002	90	1977	0	.63 1975
25	33	62	38	60	21	1984	89	1946	T	.63 2011
26	38	63	38	60	27	1950	81	1926	0	.41 2011
27	44	65	39	61	25	1970	86	1987	T	.89 1962
28	45	66	39	61	24	1907	88	1926	.01	.53 1937
29	47	52	39	61	25	1954	90	1926	.07	.58 1948
30	46	64	39	62	26	1972	82	1981	T	.51 1915
Average	43.2	66.2	36.8	57.3					0.32 Normal = 1.28	



STP Extended Forecast

COEUR D ALENE-COEUR D ALENE LAKE (COE11)

Forecast Period 05-03 to 08-30



POST FALLS

LAST SPILLGATE CLOSURES, 1997-2015

1997:	June 27	(1997 April - July CDA Lake inflow as a percent of median: 201)
1998:	June 8	(1998 April - July CDA Lake inflow as a percent of median: 86%)
1999:	July 2	(1999 April - July CDA Lake inflow as a percent of median: 134%)
2000:	June 22	(2000 April - July CDA Lake inflow as a percent of median: 126%)
2001:	June 5	(2001 April - July CDA Lake inflow as a percent of median: 60%)
2002:	July 3	(2002 April - July CDA Lake inflow as a percent of median: 169%)
2003:	June 6	(2003 April - July CDA Lake inflow as a percent of median: 68%)
2004:	June 14	(2004 April - July CDA Lake inflow as a percent of median: 85%)
2005:	May 27	(2005 April - July CDA Lake inflow as a percent of median: 62%)
2006:	June 22	(2006 April - July CDA Lake inflow as a percent of median: 115%)
2007:	May 29	(2007 April - July CDA Lake inflow as a percent of median: 72%)
2008:	July 8	(2008 April - July CDA Lake inflow as a percent of median: 170%)
2009:	June 23	(2009 April - July CDA Lake inflow as a percent of median: 120%)
2010:	July 6	(2010 April - July CDA Lake inflow as a percent of median: 90%)
2011:	July 18	(2011 April - July CDA Lake inflow as a percent of median: 190%)
2012:	July 14	(2012 April - July CDA Lake inflow as a percent of median: 170%)
2013:	June 7	(2013 April - July CDA Lake inflow as a percent of median: 93%)
2014:	June 24	(2014 April - July CDA Lake inflow as a percent of median: 119%)
2015:	April 5	(2015 April - July CDA Lake inflow as a percent of median: 35%)

Median date for the opening of the boat launch during the past 15 years (since the passage of the two Kootenai County and City of Post Falls swimmer/boater ordinances) has been June 22.

The boat launch is typically closed in November, usually right after the Veterans' Day weekend.